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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,559	08/09/2001	Rodrigo Cavazos-Gutierrez	205,268	7408

7590

07/29/2003

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EXAMINER

SHOSHO, CALLIE E

ART UNIT

PAPER NUMBER

1714

DATE MAILED: 07/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/925,559

Applicant(s)

CAVAZOS-GUTIERREZ, RODRIG

Examiner

Callie E. Shosho

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 7-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 6 is/are rejected.
- 7) ☒ Claim(s) 2-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, claims 1-6 in Paper No. 5 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 7-13 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b) as being drawn to a non-elected invention. Election was made without traverse in Paper No. 5.
3. Applicants are advised that since Group I, drawn to ultraviolet radiation curable organic ink composition, has been elected, and in the event that the composition claims are subsequently found allowable, and further, the withdrawn process claims of Group II depend from or otherwise include all the limitations of the allowable composition claims, then the process claims of Group II will be rejoined with the composition of Group I. See MPEP 821.04.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07070501 in view of Glesias (U.S. 5,100,934).

Pending formal translation and using a machine translation of the reference, it is noted that JP 07070501 discloses ink comprising 100 parts polyurethane, 100 parts epoxy resin, 10-200 parts blocked aliphatic polyisocyanate, and polyethylene wax (abstract, claims 1 and 7, and paragraphs 49 and 51). It is calculated, based on the above amounts, that the ink comprises approximately 25-83% polyurethane, 3-48% epoxy resin, and 4-65% blocked polyisocyanate.

It is noted that there is no explicit disclosure that the ink is ultraviolet (UV) curable as presently claimed. However, given that the present claims only require that the ink is UV "curable", i.e. the claims are not drawn to a cured ink, and given that JP 07070501 discloses ink comprising same ingredients, i.e. polyurethane, epoxy, blocked aliphatic polyisocyanate, and wax as presently claimed, it is clear that the ink would intrinsically be UV curable.

The difference between JP 07070501 and the present claimed invention is the requirement in the claims of polytetrafluoroethylene wax.

Glesias, which is drawn to ink composition, disclose the use of 1-5% wax including polytetrafluoroethylene wax as well as mixtures of this wax with polyethylene wax in order to improve the scuff resistance of the ink (col.4, lines 20-23).

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use polytetrafluoroethylene wax in the ink of JP 07070501 in order to produce ink with improved scuff resistance, and thereby arrive at the claimed invention.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07070501 in view of Glesias et al. (U.S. 5,100,934) and Hashimoto et al. (U.S. 5,821,031).

Pending formal translation and using a machine translation of the reference, it is noted that JP 07070501 discloses ink comprising 100 parts polyurethane, 100 parts epoxy resin, 10-200 parts blocked aliphatic polyisocyanate, and polyethylene wax (abstract, claims 1 and 7, and paragraphs 49 and 51). It is calculated, based on the above amounts, that the ink comprises approximately 25-83% polyurethane, 3-48% epoxy resin, and 4-65% blocked polyisocyanate.

It is noted that there is no explicit disclosure that the ink is ultraviolet (UV) curable as presently claimed. However, given that the present claims only require that the ink is UV "curable", i.e. the claims are not drawn to a cured ink, and given that JP 07070501 discloses ink comprising same ingredients, i.e. polyurethane, epoxy, blocked aliphatic polyisocyanate, and wax as presently claimed, it is clear that the ink would intrinsically be UV curable.

The difference between JP 07070501 and the present claimed invention is the requirement in the claims of (a) polytetrafluoroethylene wax and (b) adhesion promoter.

With respect to difference (a), Glesias, which is drawn to ink composition, disclose the use of 1-5% wax including polytetrafluoroethylene wax as well as mixtures of this wax with polyethylene wax in order to improve the scuff resistance of the ink (col.4, lines 20-23).

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use polytetrafluoroethylene wax in the ink of JP 07070501 in order to produce ink with improved scuff resistance, and thereby arrive at the claimed invention.

With respect to difference (b), Hashimoto et al., which is drawn to ink comprising polyurethane, epoxy resin, and blocked isocyanate, disclose the use of silane adhesion promoter (col.11, lines 20-21) which would enhance the adhesion of the ink to the substrate.

Although there is no disclosure of the amount of silane adhesion promoter utilized, given that the amount of adhesion promoter depends upon, for instance, type and amount of ink ingredients, it therefore would have been within the skill level of one of ordinary skill in the art to choose amounts of adhesion promoter, including that presently claimed, which effectively improves the adhesion of the ink of JP 07070501, and thereby arrive at the claimed invention.

7. **NOTE:** It is noted that there is no disclosure in JP 07070501 that the ink is used on glass substrates. However, the recitation in the claims that the ink is suitable 'for glass substrates' is merely an intended use. Applicants attention is drawn to MPEP 2111.02 which states that intended use statements must be evaluated to determine whether the intended use results in a structural difference between the claimed invention and the prior art. Only if such structural

difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

It is the Examiner's position that the intended use recited in the present claims 1 and 6 does not result in a structural difference between the presently claimed invention and the prior art and further that the prior art structure is capable of performing the intended use. Given that JP 07070501 in view of Glesias (and Hashimoto et al.) disclose ink as presently claimed, it is clear that the resulting ink would be capable of performing the intended use, i.e. ink for glass substrates, presently claimed as required in the above cited portion of the MPEP.

Allowable Subject Matter

8. Claims 2-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 2-5 would be allowable if rewritten in independent form as described above for the following reasons.

JP 07070501 discloses ink comprising polyurethane, epoxy resin, blocked aliphatic polyisocyanate, and polyethylene wax. However, there is no disclosure or suggestion of adhesion promoter as required in claims 2-5.

Hashimoto et al. (U.S. 5,821,031) discloses ink comprising polyurethane, epoxy resin, blocked isocyanate, and silane adhesion promoter. However, there is no disclosure or suggestion in Hashimoto et al. that the silane adhesion promoter is independently applied to glass substrate

before the ink composition so that the blocked isocyanate promotes a polymerization reaction and a crosslinking reaction between the epoxy-polyurethane ink and the adhesion promoter when heated to form an interpenetrating network as required in present claim 2. Further, Hashimoto et al. broadly disclose use of silane adhesion promoter. There is no disclosure or suggestion of specific type of adhesion promoter as required in present claims 3-5. Further, there is no disclosure in Hashimoto et al. of mixture of polyethylene wax and polytetrafluoroethylene wax as required in all of claims 2-5.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Noguchi et al. (U.S. 5,696,177) discloses ultraviolet curable ink for glass wherein the ink comprises epoxy-polyurethane and adhesion promoter. However, there is no disclosure of blocked polyisocyanate as presently claimed and no disclosure of mixture of polyethylene wax and polytetrafluoroethylene wax as presently claimed.

Babler (U.S. 5,554,217) discloses epoxy-polyurethane ink, however, there is no disclosure of blocked polyisocyanate as presently claimed and no disclosure of mixture of polyethylene wax and polytetrafluoroethylene wax as presently claimed.

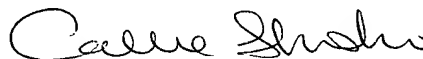
Angeline (U.S. 5,363,994) discloses primer to bind ink to glass.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
July 23, 2003